



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

Electrical Batteries for Medical Purposes.

THE WESTERN ELECTRIC MANUFACTURING CO.

CHICAGO, ————— NEW YORK,

MANUFACTURERS OF AND DEALERS IN

STATIONARY GALVANIC BATTERIES, PORTABLE HIGH
ELECTROMOTIVE FORCE BATTERIES, CHLORIDE
OF SILVER BATTERIES, GALVANO-CAUTERY
BATTERIES, FARADAIC BATTERIES, POCKET
BATTERIES, BATH APPARATUS, AND
ELECTRODES.

Dr. Butler's Plumbago Rheostat,
PLIABLE SPONGE ELECTRODES, &c., &c.

CATALOGUES ON APPLICATION.

Address all Orders to

Western Electric Man'g Co.

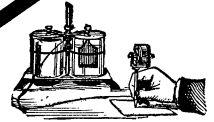
38 Union Square,
— NEW YORK —
CITY.



Full Description and Samples of Work sent on Application.

EDISON'S ELECTRIC PEN AND PRESS,

38 UNION SQUARE, NEW YORK CITY.



EDISON'S

Electric Pen & Duplicating Press,

An Extremely Useful Invention

FOR

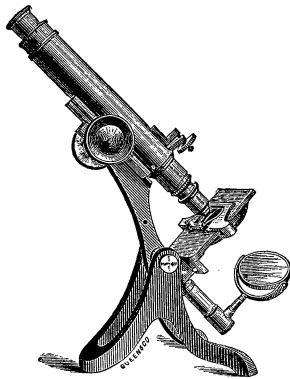
DUPLICATING WRITTEN OR PRINTED MATTER.

8,000 Copies from a Single Writing, at the Rate of 400 an Hour.

It is successfully used by Schools, Colleges, Banks, Commission Houses, Mercantile Firms, Lawyers,
Ministers, Copyists, and every person or firm desiring a number of duplicates of any document.

10,000 Pens now in Use and the Demand Steadily Increasing!

PRICE: No. 1, \$25.00; No. 2, \$30.00; No. 3, \$35.00.



James W. Queen & Co.,

OPTICIANS,

924 Chestnut St., Philadelphia. Pa.

*Magnifying Glasses, Microscopes,
Mounting Materials, Insect Pins.
etc., etc.*

Catalogues sent on Application.

Part 1st, Mathematical Instruments.
" 2d Optical Instruments.
" 3d Magic Lanterns and Slides.
" 4th Physical Instrument.

FOR SALE CHEAP.

A ZENTMAYER BINOCULAR CENTENNIAL
STAND, and large amount of accessories

List Price \$580. Will be sold for \$310.

J. W. S., care of Office of "SCIENCE."

SCIENCE

A WEEKLY JOURNAL OF SCIENTIFIC PROGRESS

Vol. II. No. 44, — — — — — April 30, 1881.

CONTENTS.

Mr. Edison and His Lamp (Edit.) ; Congreso Internacional de Americanistas ; The Unity of Nature, VII., by the Duke of Argyll ; Dolbear on the Nature and Constitution of Matter ; A Critique, by William H. Dopp ; Intra-Mercurial Planets, by A. Hall ; The Solar Parallax, by D. P. Todd ; Books Received ; Notes, Astronomical, Chemical, Microscopical, Physical, &c., &c., &c.

SUBSCRIPTION, FOUR DOLLARS A YEAR.

SINGLE NUMBERS, TEN CENTS.

BRAIN AND NERVE FOOD. VITALIZED PHOS-PHITES,

Composed of the Vital or Nerve-giving Principles of the Ox-Brain and Wheat-Germ.

IT RESTORES THE ENERGY LOST BY NERVOUSNESS OR INDIGESTION; RELIEVES LASSITUDE, ERRATIC PAINS AND NEURALGIA; REFRESHES THE NERVES TIRED BY WORRY, EXCITEMENT, OR EXCESSIVE BRAIN FATIGUE; STRENGTHENS A FAILING MEMORY, AND GIVES RENEWED VIGOR IN ALL DISEASES OF NERVOUS EXHAUSTION OR DEBILITY IT IS THE ONLY **PREVENTIVE** OF CONSUMPTION.

IT GIVES VITALITY TO THE INSUFFICIENT BODILY OR MENTAL GROWTH OF CHILDREN, PREVENTS FRETFULNESS AND GIVES QUIET, REST AND SLEEP. IT GIVES A BETTER DISPOSITION TO INFANTS AND CHILDREN, AS IT PROMOTES GOOD HEALTH TO BRAIN AND BODY.

PHYSICIANS HAVE PRESCRIBED 300,000 PACKAGES. For Sale by Druggists or by Mail, \$1.

F. CROSBY, 664 & 666 Sixth Ave., N. Y.—London, 137 A Strand.

DRAWING INSTRUMENTS

And Materials of all kinds.

OPTICAL INSTRUMENTS,

Microscopes, Telescopes, &c.

G. S. WOOLMAN, 116 Fulton Street, NEW YORK.

Send for Illus. Catalogue, and mention this Journal.

Successful Novels.

MR. PERKINS' DAUGHTER.

By the MARCHIONESS CLARA LANZA.

NOTE.—“It may be well to mention, that the state of ‘double consciousness,’ or ‘Periodical Amnesia,’ described in one of the principal personages of this story, is not by any means an isolated instance. It is, on the contrary, a phenomenon well known to neurological physicians.”

G. P. PUTNAM'S SONS,

27 West 23rd St., New York.

CELLULOID EYE-GLASSES.

Representing the choicest selected Tortoise-Shell and Amber. The **LIGHTEST, HANDSOMEST AND STRONGEST** known. Sold by Opticians and Jewellers. Made by

SPENCER OPT. MFG CO.,

13 MAIDEN LANE, NEW YORK.

American Journal of Science.

FOUNDED BY PROF. SILLIMAN IN 1818.

Devoted to Chemistry, Physics, Geology, Physical Geography, Mineralogy, Natural History, Astronomy, and Meteorology.

Editors: JAS. D. DANA, EDW. S. DANA and B. SILLIMAN. Associate Editors: Professors ASA GRAY, J. P. COOKE, JR., and JOHN TROWBRIDGE, of Cambridge; H. A. NEWTON and A. E. VERRILL, of Yale; and G. F. BARKER, of the University of Pennsylvania, Phila. Subscription Price \$6; 50 Cents a Number. Address the Proprietors.

JAMES D. & E. S. DANA, New Haven, Conn.

New York & New England R. R.

THROUGH TRAINS Via N. Y., N. H. & H. R. R. Between Boston and New York.

FROM GRAND CENTRAL DEPOT.

Leave New York, 11.00 A.M. Connects at Hartford.

“ “ “ 4.00 P.M., with Elegant Through Car.

“ “ “ 11.35 P.M., week days, with Through New Pullman Sleepers.

“ “ “ 10.30 P.M., Sundays.

FROM DEPOT, FOOT OF SUMMER ST.

Leave Boston, 9.00 A.M., week days, with Through Cars to Grand Central Depot.

“ “ “ 10.00 P.M., daily, with elegant new Pullman Sleepers.

CHART OF

ANIMAL CLASSIFICATION

The Subkingdoms, Classes, Orders and Families, with examples, arranged according to the principles of classification. **Price, 15 cents.**

Address,

A. B. GRIFFEN, 641 Broad St., Newark, N. J.

TAKE THE BEST.

THE INTERNATIONAL REVIEW.

NEW MONTHLY SERIES.

JOHN T. MORSE, JR., HENRY CABOT LODGE, Editors.

Price, 50 Cents a month; \$5.00 a year. Specimen copies sent post-paid in receipt of 15 cents.

AGENTS WANTED who understand the character, scope and value of the REVIEW, to solicit subscriptions.

A. S. BARNES & CO.,

111 & 113 William Street, New York.

H. M. RAYNOR,

No. 25 Bond St.,

NEW YORK.

(Established 1859).



FOR ALL

Laboratory

AND

Manufacturing Purposes.

Wholesale and Retail.

Scrap Purchased.

Circulars by Mail.

BEST MEDIUM FOR ADVERTISERS.

SCIENCE

Circulates in EVERY STATE IN THE UNION, also Canada, Australia, Japan and Europe.

ALL UNIVERSITIES AND COLLEGES.

Subscribers to “SCIENCE” are chiefly among those having few facilities for purchasing goods, and are buyers of Fancy Articles, Household Necessities, Jewelry, Musical Instruments, Dry Goods, Books, Prints, Scientific Instruments and Apparatus; Pure Chemical Substances, Mineral Waters, Novelties and Specialties of every kind.

Terms for Advertising moderate. Small advertisements on this page \$50 a year (52 insertions).

THE MUSCLES of the CAT.

Copies of the Descriptions of the Muscles of Neck and Arm of the Cat, with Directions for their Dissection, prepared by PROF. B. G. WILDER, for the use of students in the Anatomical Laboratory of Cornell University, and forming 52 printed octavo pages with two Hektographed Plates, may be had of F. L. KILBORNE, Ithaca, N. Y. Price, including postage, **25 cts.**, which may be sent in stamps or currency

R. & J. BECK, MANUFACTURING OPTICIANS,

1016 Chestnut St., Philadelphia.

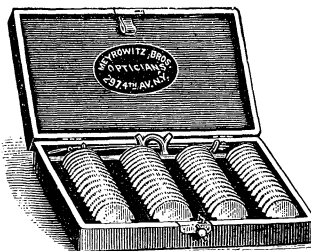
MICROSCOPES,

And all Accessories of the HIGHEST GRADES at the LOWEST PRICES.

Illustrated Condensed Price List, 32 pages. *Free.*

Full Catalogue of 176 Pages. 15 cts.

Mention this Journal.



MEYROWITZ BROTHERS,

OPTICIANS,

297 Fourth Ave., N. Y.,

S. E. COR. 23D ST

Trial Cases, Ophthalmoscopes, Artificial Eyes, Clinical Thermometers, Microscopes, Electric Batteries, etc.

Special attention given to prescriptions of Oculists.

N. B.—An Illustrated Catalogue will be sent free upon request.

American Naturalist.

Devoted to the Natural Sciences in their widest sense.

PUBLISHED MONTHLY.

Terms, \$4.00 a year. Single numbers, 35 cents.

EDITORS:

Professor A. S. PACARD, JR., and Professor E. D. COPE.

McCALLA & STAVELY, Publishers, Nos. 237-Dock Street, Philadelphia, Pa.